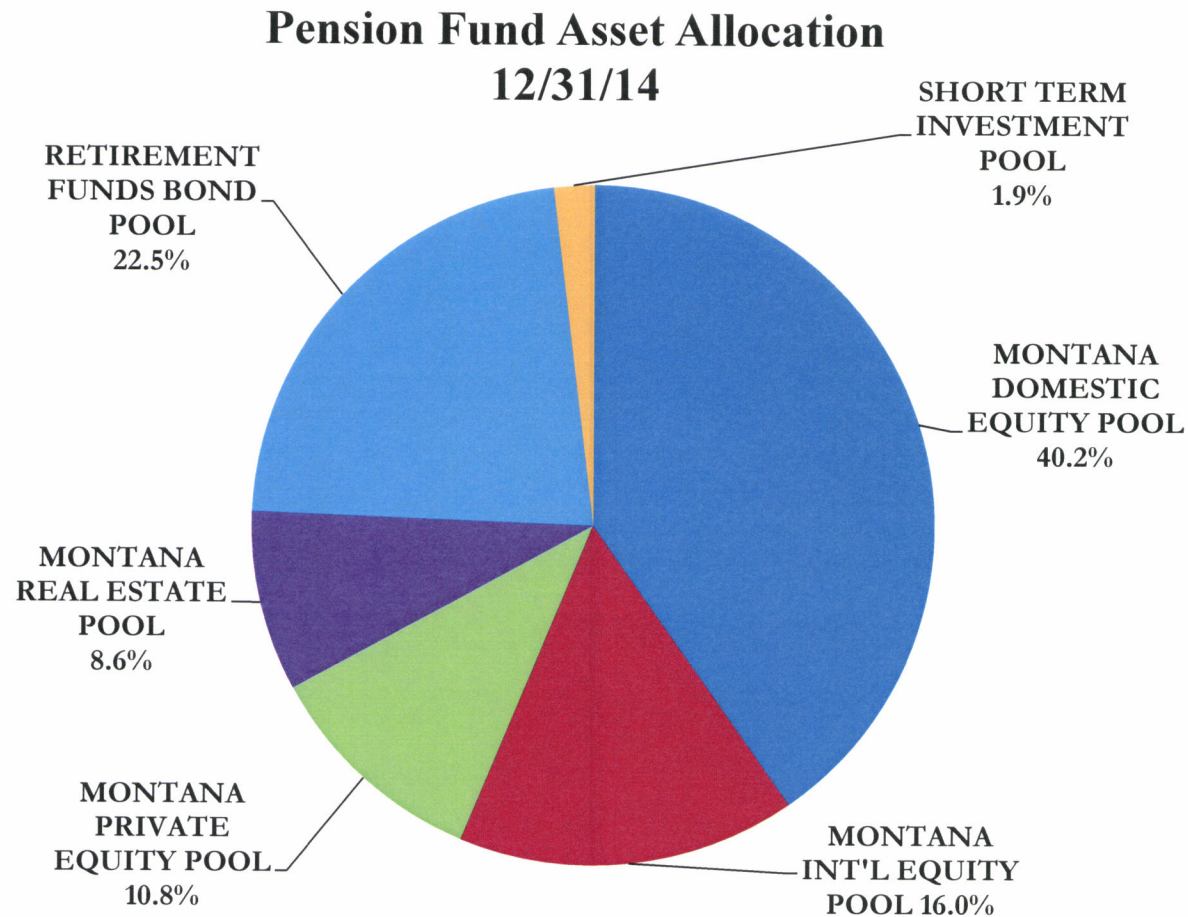


# Montana Board of Investments Pension Fund Investments

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**To:** House and Senate State Administration Committees Joint Meeting  
**By:** Cliff Sheets, CFA, Chief Investment Officer  
**Date:** March 27, 2015

# Asset Allocation Mix



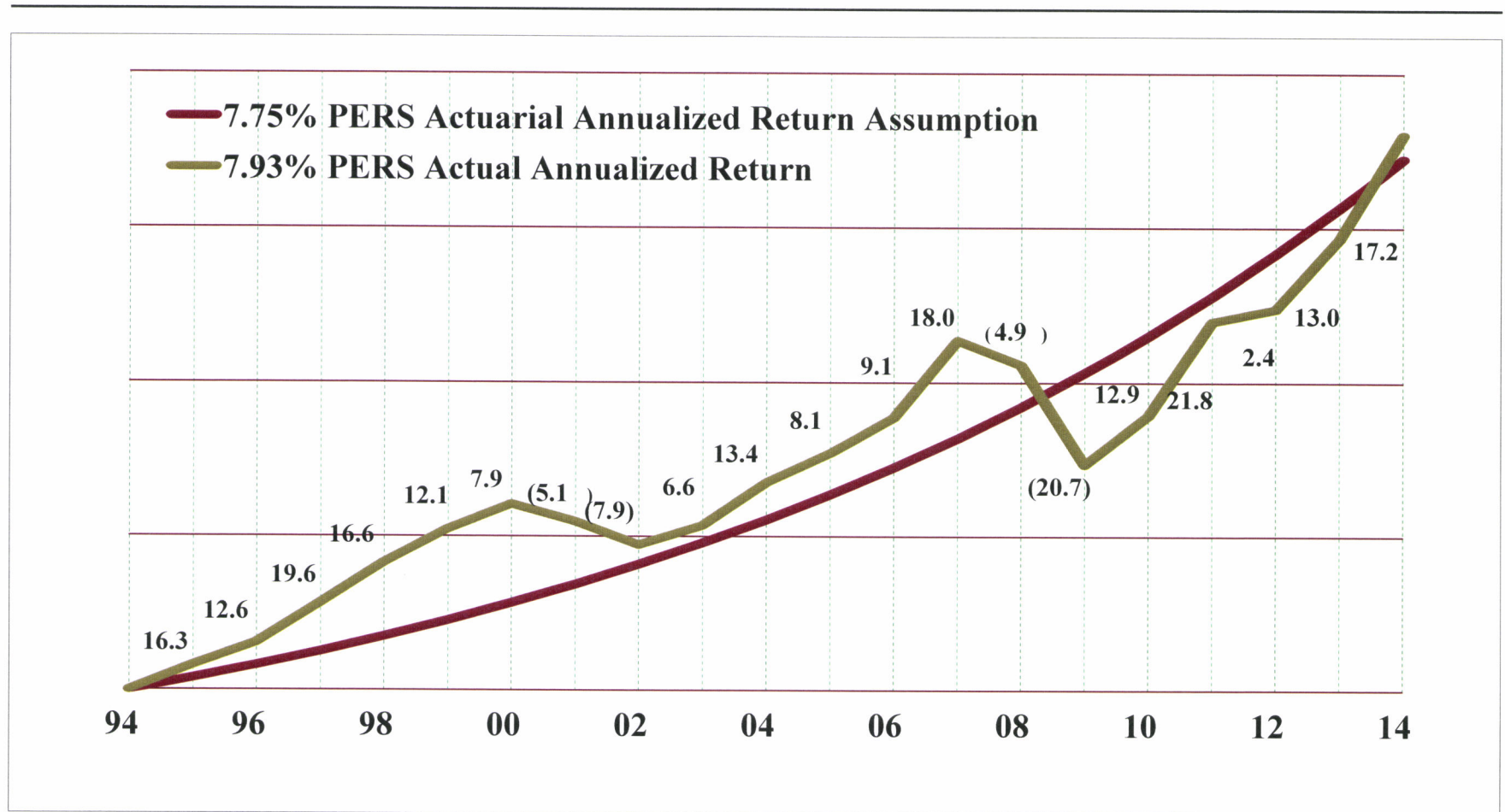
# Asset Allocation Ranges

Pension Fund Asset Allocations Total Equities Range 58 -72%			
<b><u>Domestic Equity Pool</u></b>		<b><u>Real Estate Pool</u></b>	
<b><u>Investment Type</u></b>	<b><u>Range</u></b>		<b><u>Investment Type</u></b>
Large Cap Core (passive)	45% - 70%	28% - 44%	Core/Timberland *
Large Cap Enhanced	8% - 12%		35% - 65%
Partial Long/Short (130/30)	8% - 12%	6% - 10%	Value Added
Total Large Cap	72% - 91%		20% - 45%
Mid Cap	6% - 17%		Opportunistic
Small Cap	3% - 11%		10% - 30%
			* Timberland may not exceed 2% of total pension assets
<b><u>International Equity Pool</u></b>		<b><u>Private Equity Pool</u></b>	
<b><u>Investment Type</u></b>	<b><u>Range</u></b>		<b><u>Investment Type</u></b>
Large Cap Passive	42% - 66%	14% - 22%	Buyouts
Large Cap Active	22% - 32%	9% - 15%	Venture Capital
Small Cap	8% - 16%		50% - 80%
Dedicated Emerging Markets	0% - 5%		Debt Related
			0% - 25%
<b><u>Retirement Funds Bond Pool</u></b>		<b><u>Short Term Investment Pool</u></b>	
<b><u>Investment Type</u></b>	<b><u>Range</u></b>		
Domestic High Yield	0% - 15%	22% - 30%	Short-term liquid investments
International	0% - 10%	1% - 5%	High-quality Investments
Total High Yield/International	0% - 20%		24 Hour Liquidity for Participants
Domestic Core(investment grade)	80% - 100%		

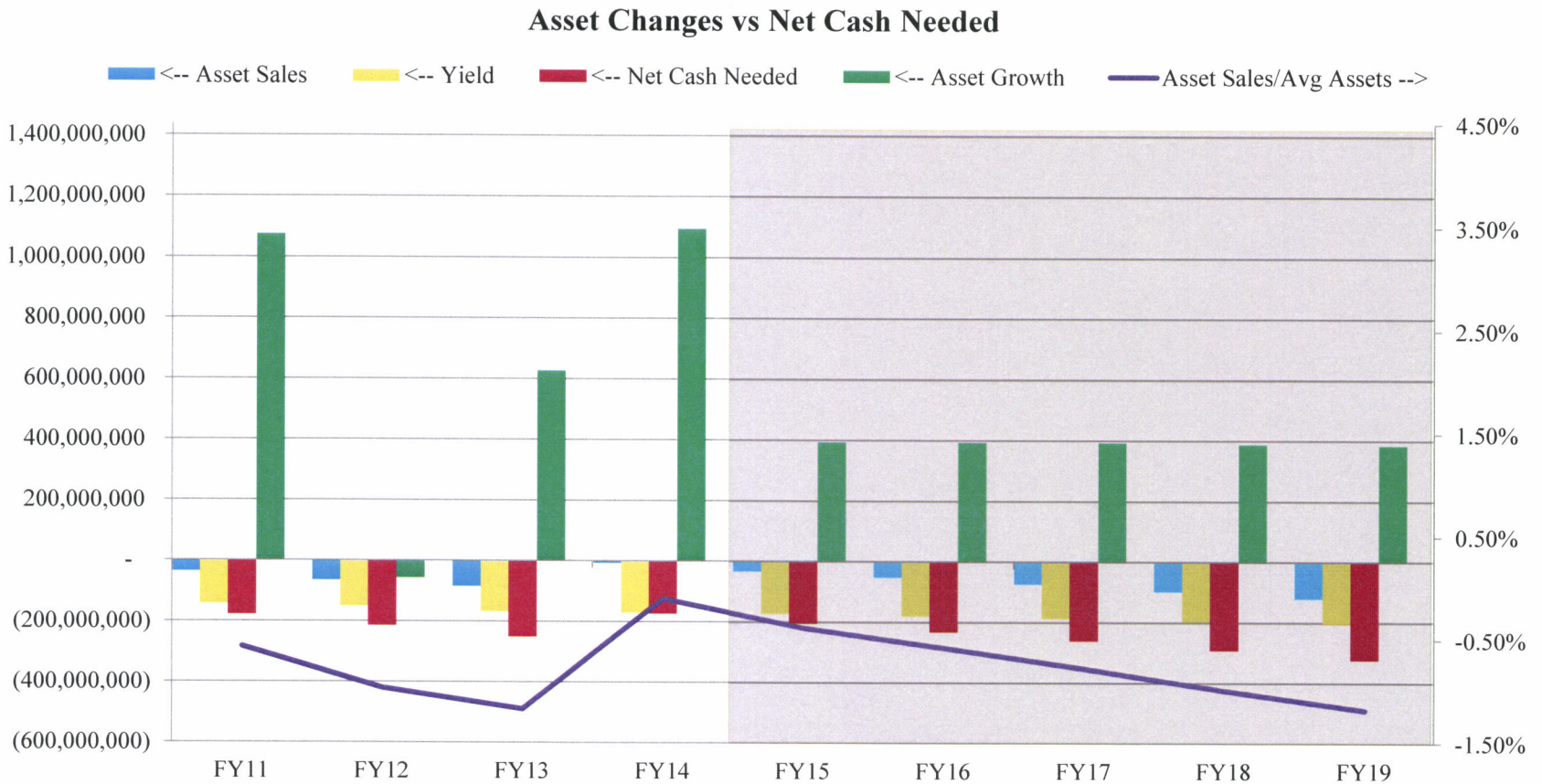
- Board approves asset classes and allocation ranges
- Asset allocation drives performance



# Actual Investment Return Versus Actuarial Assumption (Through FY14)



# Historical/Projected Change in Assets vs. Net Cash Needed



# Pension Performance Vs. Peers

## Montana Board of Investments

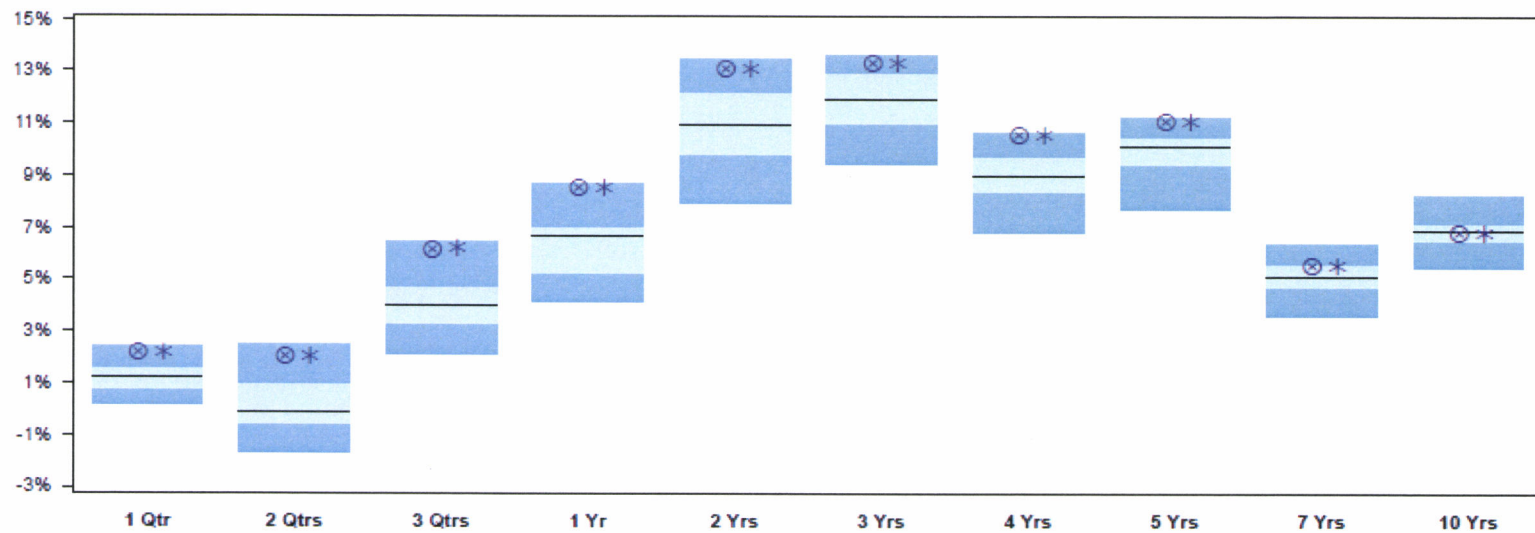
Public Funds (DB) \$3B to \$20B & >30% Equity (SSE)

PERIOD ENDING December 31, 2014

Total Returns



STATE STREET



⊙ PUBLIC EMPLOYEES RE	2.25	12	2.11	7	6.27	7	8.61	7	13.19	7	13.40	8	10.62	8	11.18	8	5.63	27	6.90	52
* TEACHERS RETIREMEN	2.25	9	2.12	6	6.29	6	8.63	6	13.20	6	13.41	7	10.63	7	11.19	7	5.63	24	6.90	52